

Applicant: Bonutti et al.
Application No.: 10/795,892
Examiner: A. Wicker

Amendments to the Claims

1. (Currently amended) An orthosis for stretching tissue around a joint of a patient between first and second relatively pivotable body portions, comprising:

a first arm member affixable to the first body portion and including a first extension member extending therefrom;

a second arm member affixable to the second body portion and including a second extension member having an arcuate shape extending therefrom, the second extension member is operatively connected to the first extension member and travels along an arcuate path through the first extension member when the second arm member is moved from a first position to a second position relative to the first arm member, wherein the arcuate path and the joint lie in a plane substantially orthogonal to an axis of rotation of the joint.

2. (Original) The orthosis of claim 1, further comprising a first cuff attached to the first arm member.

3. (Original) The orthosis of claim 2, wherein the first cuff is fastenable about the first body portion tightly enough that the first arm member may apply a force to the first body portion without having the first cuff slide along the first body portion.

4. (Original) The orthosis of claim 2, wherein the first cuff is slidably mounted to the first arm member.

5. (Original) The orthosis of claim 1, further comprising a second cuff attached to the second arm member.

6. (Original) The orthosis of claim 5, wherein the second cuff is fastenable about the second

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body portion tightly enough that the second arm member may apply a force to the second body portion without having the second cuff slide along the second body portion.

7. (Original) The orthosis of claim 5, wherein the second cuff is slidably mounted to the second arm member.

8. (Original) The orthosis of claim 5, wherein the second cuff is articulately mounted to the second arm member.

9. (Original) The orthosis of claim 1, further comprising a hand pad attached to the second arm member.

10. (Original) The orthosis of claim 9, wherein the second body portion is a hand of the patient and the hand pad is fastenable about the hand of the patient tightly enough that the second arm member may apply a force to the hand of the patient without having the hand pad slide along the hand of the patient.

11. (Original) The orthosis of claim 9, wherein the hand pad includes a convex surface for engaging a palm portion of the hand of the patient.

12. (Original) The orthosis of claim 9, wherein the hand pad includes a concave surface for engaging a back surface of the hand of the patient.

13. (Currently amended) The orthosis of claim 9, wherein the hand pad is selectively, ~~removable~~ removably attached to the second arm member.

14. (Original) The orthosis of claim 13, wherein the hand pad includes a convex surface for

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engaging a palm portion of the hand of the patient.

15. (Original) The orthosis of claim 13, wherein the hand pad includes a concave surface for engaging a back surface of the hand of the patient.

16. (Currently amended) ~~The orthosis of claim 9,~~ An orthosis for stretching tissue around a joint of a patient between first and second relatively pivotable body portions, comprising:

a first arm member affixable to the first body portion and including a first extension member extending therefrom;

a second arm member affixable to the second body portion and including a second extension member having an arcuate shape extending therefrom, the second extension member is operatively connected to the first extension member and travels along an arcuate path through the first extension member when the second arm member is moved from a first position to a second position relative to the first arm member; and

a hand pad attached to the second arm member, wherein the hand pad is slidably mounted to the second arm member.

17. (Currently amended) The orthosis of claim 9, wherein the hand pad is ~~articulatingly~~ articulatingly mounted to the second arm member.

18. (Original) The orthosis of claim 1, further comprising a drive assembly on the first extension member, the drive assembly engaging the second extension member for selectively moving the second arm member with respect to the first arm member.

19. (Original) The orthosis of claim 18, wherein the drive assembly includes a gear rotatably mounted in the first extension member.

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20. (Original) The orthosis of claim 19, wherein the second extension member includes a plurality of teeth for engaging the gear.
21. (Currently amended) The orthosis of claim 20, wherein the gear is ~~manually~~ manually rotatable for selectively moving the second arm member with respect to the first arm member.
22. (Original) The orthosis of claim 19, further comprising a motor operatively connected to the gear for selectively moving the second arm member with respect to the first arm member.
23. (Cancelled)
24. (Original) The orthosis of claim 1, wherein the joint defines a first plane substantially orthogonal to a longitudinal axis of the first arm member and a second plane substantially parallel to the longitudinal axis of the first arm member.
25. (Original) The orthosis of claim 24, wherein the first extension member extends from the first arm member, such that the operative connection of the first and second extension members lies in the first plane.
26. (Original) The orthosis of claim 24, wherein the first extension member extends from the first arm member, such that the operative connection of the first and second extension members is in front of the first plane.
27. (Original) The orthosis of claim 24, wherein the first extension member extends from the first arm member, such that the operative connection of the first and second extension members is behind the first plane.

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28. (Original) The orthosis of claim 1, wherein the first extension member is selectively, pivotably connected to the first arm member.

29. (Currently Amended) ~~The orthosis of claim 1,~~ An orthosis for stretching tissue around a joint of a patient between first and second relatively pivotable body portions, comprising:
a first arm member affixable to the first body portion and including a first extension member extending therefrom; and
a second arm member affixable to the second body portion and including a second extension member having an arcuate shape extending therefrom, the second extension member is operatively connected to the first extension member and travels along an arcuate path through the first extension member when the second arm member is moved from a first position to a second position relative to the first arm member, wherein the joint and the first and second body portions defining on one side of the joint an inner sector which decreases in angle as the joint is flexed and defining on the opposite side of the joint an outer sector which decreases in angle as the joint is extended, such that the operative connection of the first and second extension members is located in the outer sector.

30. (Original) An orthosis for stretching tissue around a joint of a patient between first and second relatively pivotable body portions, the joint and the first and second body portions defining on one side of the joint an inner sector which decreases in angle as the joint is flexed and defining on the opposite side of the joint an outer sector which decreases in angle as the joint is extended, comprising:

a first arm member affixable to the first body portion and including a first extension member extending at an angle α therefrom;

a second arm member affixable to the second body portion and including a second extension member having an arcuate shape extending therefrom, the second extension member operatively connected to the first extension member and traveling through the first extension

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member along an arcuate path when the second arm member is moved from a first position to a second position relative to the first arm member, wherein the operative connection of the first and second extension members is located in the outer sector; and

a drive assembly on the first extension member, the drive assembly engaging the second extension member for selectively moving the second arm member with respect to the first arm member.